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## NOVELTIES IN FIELD AND GARDEN.

BY THE AUTHOR OF "TEN ACRES ENOUGH."

Some ingenious writer will one day favor the world with a volume whose title should be "The Curiosities of Horticulture" Neither literature, the sciences, the mechanic arts, nor any of the multitudinous occupations to which the human mind has been directed, contain more striking instances of curious discoveries than have been made in agriculture and its kindred pursuits. It is true that none of these have so extensively revolutionized the industrial world as did the cotton gin or the power loom. The masses who cultivate the fields or decorate the garden form but a portion of the great aggregate of humanity. Yet each subdivision of terraculture has a world of its own, in which discoveries have from time to time been made, as sensational within its limited atmosphere as was that of either steamboat or telegraph to the whole. Of these, the reaping machine was a triumph whose far-reaching value it would be difficult to estimate. Vast fortunes have fallen to the lot of the originators of many of these discoveries. Hence the yet unexhausted field of agricultural and horticultural invention continues to be explored by other minds in search of new devices for the better accomplishment of old processes, knowing that the world is waiting for them, and that they will be sure of being rewarded.

So has it ever been in horticulture, and so will it continue to be. The history of this world-wide art abounds in curiosities, personal, pecuniary, mechanical, and scientific. Its chapters of vicissitudes and failures would be long and painful ones; but, like the huge jumble of obsolete models on the dusty shelves of the Patent Office, they would be full of instruction, as well as of warning, to those who are to succeed us. Of its successes there would be brilliant and encouraging records; for it is remarkable what fortunate results have been realized from small beginnings. A century ago only four pinks were known to English florists, all which were very different flowers. James Major, a ducal gardener, bethought him that he would sow a few seeds, from which he succeeded in raising a few plants. When coming into bloom the following season, one of them proved to be the first double pink that had ever been seen. Great as was the superiority of this flower, its originator regarded

it only as the forerunner of still more brilliant varieties which time and attention would enable him to produce. All these anticipations have been realized in the extent and beauty of this attractive family of flowers. The advent of this first double pink created a sensation in the floral world of England a century ago. Major was offered ten guineas for the plant, but declined selling, and proceeded the next season to multiply the stock. The result of one year's care was a profit of £80,—a great sum in the pocket of a gardener a hundred years ago.

The stimulating hope of reward is infinitely more potent now. Public taste has been educated to the highest point of appreciation, and wealth has become so extensively diffused, that floriculture receives its full share of an unprecedentedly lavish expenditure. Novelties are appreciated and sought for, hence all classes are ambitious to originate them on their own grounds, or to discover them in the remote and waste places of the earth. The great European florists have their botanists swarming over distant countries in perpetual search after new flowers. They have thus made the whole world tributary to a constantly increasing public demand. Enormous expenses are encountered in maintaining these expeditions, but the universal call for fresh varieties renders the result a profitable one. It was these floral missionaries who caused Mexico to yield up the cactus and the dahlia. Their labors under tropical suns have made England gorgeous with flowers, for nearly all she has are exotics. Southern Europe gave her the rose; America, the honeysuckle and passion flower; Hungary, the laburnum; Italy, the daffodil; while lavender, rosemary, and mignonette were also from the south of Europe. The catalogue of English fruits will also show how largely she has been benefited by foreign lands. Italy gave her the mulberry; Syria, the plum and apple; Flanders, the cherry, gooseberry, and strawberry; Greece, the apricot and currant; Portugal, the grape; Persia, the peach and nectarine; and America, the raspberry and walnut.

But other countries have shared in this system of international exchange of fruit and flower. Our own fields and gardens are crowded with precious contributions from foreign lands, yet the unsatisfied appetite for novelties of all kinds increases, because the circle interested in them is annually widening. As the wealth of our country accumulates, so is our ability to indulge in horticultural pursuits enlarged. A crowd of able publications devoted to the science act as educators and stimulants. Architecture contributes its ornamental designs for rural embellishment and comfort, and great wastes of stunted oak and brushwood are transformed by practiced hands into charming landscapes, wherein Flora and Pomona may find ever-fragrant and ever-fruitful homes.

There is an expectant multitude for every novelty the earth can be made to produce, whether it be useful or ornamental. If the originator of a pink receives an abundant reward, we may be assured that there is profit for the fortunate genius who first astonishes the world with a new and better squash. Plebeian though the latter may be, it might still prove as rich a speculation as a new rose, seeing that there are hungry multitudes as prone to squashes as to roses. They have stomachs which, with painful regularity, require to be filled; and these unwashed masses keep fat and hearty without developing even the most latent taste for flowers. The discoverers of the useful thus also have their reward. But few of us have the remotest idea of the skill, the patient waiting through years of trials and of proving, which the painstaking originators of even new vegetables are required to exercise and endure, after all to find themselves disappointed. We hear of the successes, but of the multitude of failures no sign is made.

It is universally admitted that the laborer is worthy of his hire,—the inventor,

of his reward. I have been thinking over the proposal of my friend Fuller, that the originator of a new plant should be protected in his discovery by patent. The propriety of such protection strikes me as being eminently just. A man will devote years of patient watchfulness and skill in the production of a new and valuable variety of fruit or flower, and his reward is limited by the sale of such stock as he may choose to accumulate before offering his discovery to the public. When once in possession of the latter, it is multiplied in winter and summer, every conceivable forcing process being instantly invoked to manufacture a world-wide supply. The originator receives but an indifferent reward; and though he may seek for a fair one by demanding high prices, yet this strictly honorable effort is unsparingly denounced as an extortion. Instances have been known of a new fruit having been stolen from the grounds of the originator, and secretly multiplied until he brought it into market, when the dishonest competition robbed him of a large share of what he had laboriously earned.

The Government protects the inventor of a clothes-pin or a goose yoke by a patent running seventeen years. These implements are merely new developments of old processes. The materials composing them are well known, and are common property, the production of nature, whether of wood or metal. It is from these that the inventor fashions and combines his new device, which, because of its being new and useful, is secured to him by patent. He may fill warehouses with his improved goose yokes, refuse to sell them to an impatient public, and no one dare manufacture them, except at his peril. When he does sell, no one but himself can produce them, unless by license. His monopoly of the market for goose yokes is absolute, and can not be broken up except by some more ingenious mind inventing a different and better one. The most trifling mechanical contrivances have thus become stepping-stones to fortune. How little ingenuity it required to invent the goose yoke or the clothes-pin! yet the Government protected that little, and the protection secured rich rewards. Not so with the originators of new and better fruits and flowers. They labor in this vocation year after year, concentrating upon their efforts the experience and skill of a lifetime, and not succeeding oftener than once in five hundred trials. Even when signally successful, their reward is too often far below their merits. Take the Albany Seedling Strawberry as an illustration. Here is a fruit of untold value to the nation, the unquestioned offspring of a single individual. That berry must have enriched hundreds of fruit-growers, and is destined to enrich thousands. But who can say that its originator received the reward to which he was entitled, or give the world a history of the time, and labor, and patient waiting which he went through before he succeeded in his great discovery?

There may be difficulties in the way of carrying Mr. Fuller's programme into practice, but they may be overcome. As the law now stands, no one can manufacture a patented article without a license from the patentee. Let the inventor of a new plant receive his patent for it. When he sells the plants, let him also require payment for the right to manufacture and sell other plants in a specified territory. If it be valuable, the purchaser of the right to that territory may dispose of rights to others, and thus refund himself for what he paid the patentee. Should the plant be offered for sale beyond the limits of the territory sold, the patentee will become aware of it, and can prosecute for infringement, precisely as in the case of a machine or process. There ought to be no difficulty in having Mr. Fuller's excellent suggestion adopted. At first sight it will strike many as an absurd and impracticable novelty. But let its fairness and justice be once admitted, and then make it law. It is protection alone that has given

to American ingenuity its present mighty progress in the arts. Extend that protection to the arts of horticulture and floriculture, and an inconceivable impulse will be given to the highest development of both.

## SOMETHING OF VINES AND CLIMBERS, AND SOMEWHAT OF THEIR APPROPRIATE USES.

By the cottage porch, as well as the finished portico; by and in the rustic vase, as well as the marble fountain; everywhere that man seeks to decorate and adorn, do we find some variety of climbing vine. The showy and brilliant Tecoma, with its hundreds of scarlet trumpet-shaped flowers, attracts and commands admiration, to entire forgetfulness of the rude building which supports it; the light and airy Woodbine,

> "That loves to hang on barren boughs
> Her wreaths of remote flowery perfume,"

by its light, yet airy, negligent character, gives to the rustic porch an appearance of refinement, an impression that beneath its shelter there dwells a mind alive to the emblems and manifestations of God's love to man. Everywhere, in the wild wood, on the mountain, and by the river-side, in the green-house, and the flower parterre; decorative of the brow of science, and clinging around the tomb of departed friends; everywhere are found vines, and everywhere do they so harmonize with either nature or art, that no harsh lines or thoughts intrude when viewing them.

In the formation of artificial rock-work, or over the edge of some bare yet needful excavation, a few vines relieve the want of taste or knowledge in the builder, or render what would be bare and harsh to the eye pleasing, if not romantically attractive. A few rocks, natural to the geological surface of the country, and thrown together void even of any taste and art, but covered with the Ampelopsis, or Virginian Creeper, will often give a better, more harmonious, and pleasing effect than any construction, no matter how artistic, of curious stones, slag of glass-houses, and scoria from blast-furnaces. The last two

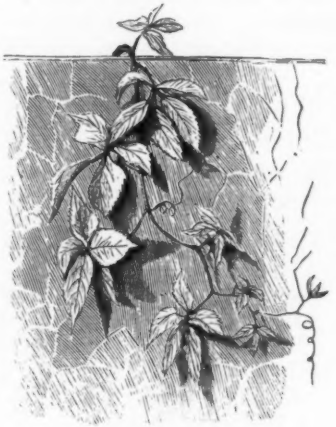

Fig. 82.—*Ampelopsis.*

are ugly in themselves, unpropitious to the growth of plants, and only belong where an in-door mineralogical rock-work museum is desired.

Among all the various vines and creepers, none possess such great luxuriance and beauty in foliage, more perfect hardiness or rapidity in growth, or so great a variety of colors and richness in autumn foliage, when it changes from a rich green to a mingling of scarlet, orange, crimson, and purple, as the Ampelopsis, or American Woodbine.

Next among our native vines we have

the climbing Bittersweet (*Celastrus*), fig. 83. It is more woody in its character, and admirably adapted to the covering of rustic arbors, as its stems as they grow and increase in size from year to year serve to sustain and prop up any decaying post or arch. Trained as a pillar on the point of a roadway or in the shrubbery, where its deep green and handsome foliage, followed by the orange scarlet of its large clusters of seeds in autumn and early winter, makes it ever an object of beauty and attractiveness.

The *Tecoma*, or Trumpet Flower or Creeper, although of late years comparatively little used, because perhaps of its becoming so common, has claims for certain positions unequaled by any other vine.

FIG. 83.—*American Bittersweet.*

Like the Bittersweet, its stems assist in the support of decaying wood-work upon which it may cling (fig. 84), while the great beauty and abundance of its trumpet-shaped orange-scarlet flowers in July and August, with its pinnate-shaped, glossy light green foliage, make it always a fea-

FIG. 84.—*Trumpet Flower.*

ture to which the eye turns in admiration of its splendor. For covering unsightly fences, to shut from view some rude outbuilding, or trained upon the body of some old tree, there is no climber so easily procured or grown, and few that possess more desirable qualities. It is occasionally a little tender while young, and in some northern locations it is well to cover, or in some way protect it for the first two winters.

Contrasting strongly in habit, period, and color of flowers with the last-named is the Wistaria (fig. 85), of which there are several varieties, the best among them being the *Chinensis*, or Chinese Wistaria. This also has a woody stem, and when once established grows freely in almost any soil. It is a very rapid grower, shoots frequently, making a growth of twenty to thirty feet in a season, so that in half a dozen years one

plant will cover the whole side of a house, and with its hundreds of racemes of bluish-purple, sweet-scented flowers in May and June, can be considered one of our most magnificent climbers. There is a variety with white flowers, and when two or more are to be planted, it should be used. For training upon an architectural portico, or an iron balcony or rail, it is admirably adapted.

The Honeysuckle (*Lonicera*) is a class of

FIG. 85.—*Wistaria.*

climbing vines of easy culture; all are beautiful in foliage and flower, and some varieties have very fragrant flowers, like the belgica and japonica. This latter (fig. 86) has a slender stem or vine, with various colored flowers, very fragrant, and when not exposed too openly to the sun, retains its foliage all winter. It blooms freely from May to September, and is one most desirable of all the varieties. Grown and twined intermingled with the Wistaria, it adds much to the latter when in bloom. The

FIG. 86.—*Crimson Honeysuckle.*

orange-colored (fig. 87) is a variety with which we do not often meet; but from its broad, dark, coarse foliage and orange-red

FIG. 87.—*Orange-colored Honeysuckle.*

flowers is highly ornamental for covering arbors, etc. The old scarlet flowering, or coral, is also another of the good ones among this family, of which all are beautiful and appropriate for rock-work, arbors, or masses in the shrubbery.

## TWO FINE APPLES.

BY CHARLES DOWNING, NEWBURG, N. Y.

DEMOCRAT—(VARICK).

ORIGIN uncertain; some claim it to be Trumansburg, and others say it was brought from Dutchess Co., N. Y., some forty years since, and was there called Varick Apple. It is considerably grown in Tompkins and Seneca Cos., N. Y., and is a fine winter apple, and worthy of a place in every orchard, especially for family use. George S. Conover, of West Fayette, Seneca Co., N. Y., to whom I am indebted for specimens, etc., writes me:

"From all I can learn, it is supposed to have originated in the vicinity of Tru-

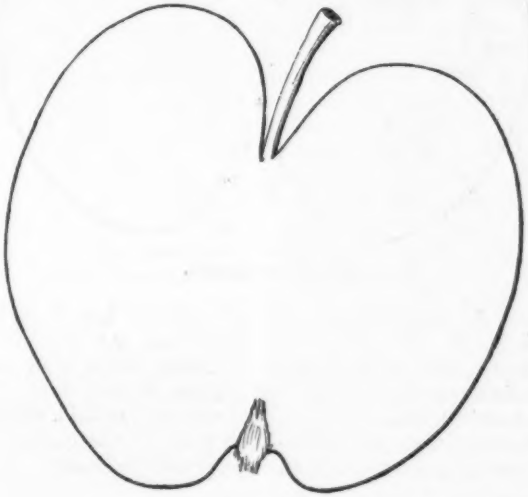

FIG. 88.—*Democrat.*

mansburg, Tompkins Co., N. Y., and known there as the Democrat. Tree, vigorous, upright, a good bearer, and generally produces a bountiful crop every other year, and often a moderate crop alternate years; fruit, always fair, remarkably so for so great a bearer. It is also a good keeper."

Fruit, medium; size, roundish conical, obscurely ribbed; skin, pale whitish yellow, shaded, partially striped and splashed with light and dark crimson nearly over the whole surface, and pretty thickly sprinkled with small light dots; stalk, rather short, slender, set in a large, deep, regular cavity; calyx, small, closed, seg-

ments small and short, coming to a point; basin, medium, rather deep, corrugated; flesh, white, fine, sometimes a little stained next the skin, very tender, juicy, mild, pleasant, subacid; flavor, very good or best; core, rather large; ripe from December to March.

STYMER'S APPLE,

a new promising late fall or early winter apple, originated on the farm of Jacob Stymers, in the village of Dobbs' Ferry, on the Hudson. Specimens were sent me by Dr. James Fountain, who informs me that the young tree came up under an old Spitzenburg apple-tree—the whole orchard being Spitzenburg. Tree, a vigorous grower, rather more upright than Spitzenburg, but resembling it somewhat; rather tardy coming into bearing; young wood, dull reddish brown, slightly downy.

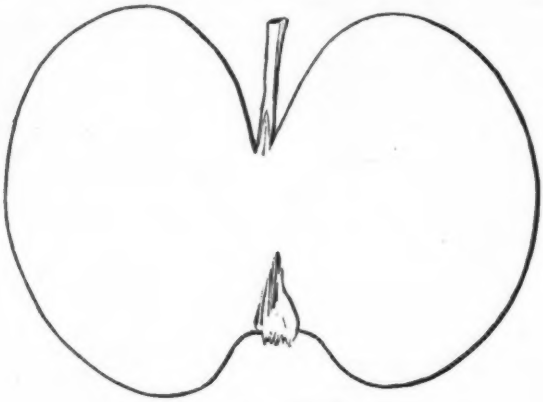

FIG. 89.—*Stymer's.*

Fruit, medium size, oblate, inclining to conic; surface, smooth, and nearly regular; skin, yellowish, shaded, striped and splashed with light and dark red (nearly over the whole surface), with some of the splashes dark crimson, moderately sprinkled with light and gray dots; stalk, short and small, set in a large, deep cavity; calyx, closed or partially open, segments short, erect; basin, large, deep, uneven; flesh, fine, whitish, tender, juicy, mild, pleasant, rich, subacid, slightly aromatic, very good, or best quality; core, small; ripe, October to January.

BUDDING MARSHAL NIEL ROSE ON GLOIRE DE DIJON.—Those of your readers who possess a strong plant of Gloire de Dijon, will be well repaid if they devote a part of it to Marshal Niel. Two years since I budded a shoot about half-standard high; last year by closely pinching all the shoots I formed a bushy head, which this year is a glorious cluster of blooms. The stock appears to have sufficient influence to color the outer petals of a rosy buff, closely resembling the Gloire de Dijon; the inner petals are the deepest yellow, and the flowers are wonderfully solid and well-formed.—T. F. R., in *Cottage Gardener.*

## NOTES ON FRUITS IN THEIR SEASON.—RASPBERRIES AND BLACKBERRIES.

BY F. R. ELLIOTT.

According to my observation and information, the canes of raspberries in northern Ohio and a large portion of the West matured well last year, wintered with comparatively little injury, and in their due time blossomed and set full of fruit. The first berries matured well; but owing to the great heat of the season, the second did not fill as perfectly; the third less perfect; and the last to form were mostly a failure. This has varied, of course, in varieties,—the False Red Antwerp—or as more commonly called Allen—and the *thornless* Black Cap maturing the first berries and perfecting perhaps a larger proportion of the crop than other sorts. The Kirtland, Franconia, Red Antwerp, Hornet, and Naomi followed in ripening about in order as I have named, while the American or Doolittle followed the Thornless, and was again followed by Philadelphia and Miami, and these by Mrs. Wood; and these, again, as I write—August 15—are followed by Belle de Fontenay producing its second crop. So much for their comparative order; and now for their values comparatively for family use and for commercial marketing. The price governing sorts has ranged at an average of six dollars a bushel for Black Caps; and for the Antwerp class, such as Allen and Kirtland, an additional dollar per bushel was readily obtained; while Naomi brought yet an additional dollar, and was readily taken by dealers.

In this section, the Kirtland, Allen, and Naomi are just as hardy as the Black Caps; and so far as a local market will take the fruit, the first two are in their season more profitable; while Naomi, by reason of its firmness of fruit for shipping, large size, and superior quality, can not fail of value where even a distant market is to be supplied. The productiveness of the Allen and Kirtland is about the same, while the Allen is a little the most firm, and the Kirtland the largest and much the best in quality. I will here notice a little slur cast on my knowledge of the Kirtland by a late *ad interim* report of the Secretary of the Ohio Horticultural Society, where he states as follows:

"An old bed of the Kirtland Raspberry was examined quite critically by Colonel Richmond and Mr. Lum, of Sandusky, as these gentlemen were inclined to the opinion that the true Kirtland, as originally named by Mr. Lum, was not the same described and figured by Elliott, or known by him and Dr. K. as the Kirtland, and this opinion they claimed was confirmed by the inspection of this old bed, which they asserted was composed mainly of the spurious sort, but had a few of the genuine in it, the latter being a larger and better fruit, and more conical in shape than the other."

I have only to remark that I have a high respect for Messrs. Lum and Richmond, but believe my knowledge of the original Kirtland, from many years' examination and gathering the fruit from canes in the original bed (which bed, I may here say, was, and would have been, unknown, except by reason of my daily examination and comparison in tracing up the sort sent out by Mr. Lum), is perhaps quite as correct as an examination made by Messrs. Lum and Richmond of half an hour, and with little or no fruit on the canes.

To return: the Allen, Kirtland, and Naomi have been here grown on sand as well as clay soil, and successful in each. For market, the Allen and Naomi are most desir-

able; but for family use, or a home consumption market, the Kirtland should take the place of the Allen.

The Clarke has not fruited well with me this year, nor did I have opportunity to examine it elsewhere. The Philadelphia is all in productiveness that has been said of it, but the quality is so inferior, that I only wonder any good horticulturist could ever have the heart to advise his fellow-men to grow it. If a man could grow it and nothing else, then on the ground that any fruit is better than none, it might come in, but otherwise it smacks too much of Wall Street, and has too little of the goodness which belongs to the lover and grower of God's blessed fruits ever to have any hearty commendation. Like a crab apple or Windsor pear, it may do in absence of all else; but woe be to the consumer! Better to have looked at it admiringly, without any contaminating knowledge. I speak of it as when eaten out of hand. Cooking and sugar ameliorate, and so used it may be, and probably is, palatable, if not good.

The Duhring has killed down every year; and even under protection one winter, it failed, giving two or three meager fruits only. I pass it as a humbug.

The Franconia, Fastolf, Red Antwerp, etc., we know all about; and so knowing, know that when the canes are covered in winter, the crop is good, and the quality of Red Antwerp surpassed by few or none. The Hornet is sometimes hardy, but again is killed, so that, like the Franconia, it can not be depended upon without covering. Covered, it is a productive and profitable firm market fruit.

If among the perpetuals or ever-bearing sorts there is any desirable character, I think Belle de Fontenay stands at the head. True, it suckers most unmercifully; but the suckers can be cut away as easy as any weeds, and it certainly does bear abundantly, and of a good size and rich fruit. The Catawissa has good qualities; but of the two, for family use, give me Belle de Fontenay. It is larger, looks better, is of superior flavor, and produces more berries with me. The Lindleyana has every year killed with me, even when protected. The Prosser I have not fruited. Through the kindness of a friend I have a plant of it, but it looks and grows as if it were sorry it did not keep near the ten acres that noised it to the world.

The varieties under numbers that have been sent by courtesy from Charles Arnold, Esq., to various amateurs in the States, are all good, but according to my test and comparison, only one—viz., his No. 1—is worthy of continued propagation. The canes of this are perfectly hardy, and the fruit is abundant, fully as large as figured in the HORTICULTURIST by Mr. Fuller, August, 1867, but not as conical. It is of a dull yellow color; and for those unwilling to give Brinckle's Orange a winter covering, it is the best light colored berry yet out. In other words, it is the best *hardy* light yellow raspberry known, and should be had by every lover of raspberries. Brinckle's Orange (let us keep the prefix of *Brinckle*, from respect to one of the most honest and enthusiastic horticulturists the world has known) is the very, very best yellow raspberry. It pays to cover its canes in winter; but if left uncovered, nine times out of ten it produces good crops of fruit, so good, that if the grower, like myself, has children, he will find it hard work to keep the fruit, for most unconsciously—"only just one," do you hear the child?—it will soon all be gone.

Let us now turn to the Black Caps. I have spoken of the Thornless. Mine was not obtained as a new thing, or as the Davison; and as I have not seen the Davison, may be all unlike; but a thornless raspberry is no *new* thing, nor do I think the lack of thorns any item, unless the fruit is of abundance and quality to equal varieties having thorns. The plants I have were from one selected by myself some years since, say eight, out of a cluster of wildlings which I was removing. I fruited my

first cane, found it early—in fact, one of the very earliest to ripen—abundantly prolific, of good size and flavor, not extra large, a good strong grower; and so finding, propagated a small number for my family supply. I consider it valuable for my family, and *measurably* so for market. The American or Doolittle all know about. It has done well hereabouts this year, and is undoubtedly one of our staple reliable sorts. Ellisdale, Surprise, Miami, and Seneca I have only had opportunity of examining on a small scale, and that under so high a condition of culture, I have nothing to say of them. I see, however, Mr. Fuller speaks confidently of Ellisdale; Mr. Husmann of Surprise; and others of Miami; but I, in my want of knowledge, have great faith in the value of Mrs. Wood as a hardy sort, extremely productive, of a fair size, moderately firm, of good flavor, and maturing so as to continue the season two weeks later than the Doolittle.

Of blackberries I have very little this year to say. The New Rochelle or Lawton were nearly half killed last winter, but the remainder of the canes have fruited as of years before, large and sour. Crystal White killed all down, so did Kentucky White; and Claret, Mason's Mountain, Missouri Mammoth, and a host more of sorts, are growing for future notes; but while I yet think Dorchester the very best flavored, the richest berry, I grant the Kittatinny almost rivals it in flavor, is superior in size, more than three times as productive, and is the best, all in all, of any sort yet fully tested. Wilson is a market sort, but too inferior in quality for any good horticulturist's table.

## THE SEDUM AS AN EDGING PLANT.

Some years since we had a bed or border, in which we grew annuals, encircled with sedum album; and recently reading an article in the *Cottage Gardener* upon the use of sedums as edging plants, our mind was recalled to our former practice, and connected therewith we write to advocate their use to a greater extent than has been commonly practiced. An edging plant should be hardy, and such are nearly all the sedums; it should be of close, compact growth, and always green, which is the case with the sedums. In our case, we remember that the last year we made a part of our edging with sedum Sieboldii, which, as it flowered later and its flowers were more conspicuous, attracted greater notice than the common sort. A change of position caused our loss of the sedum edge; and our next planting of them was in delicate points and foreground of rockwork, where we have also found them a very desirable plant. The great number of varieties now in cultivation give the grower a fine chance to give variety to the edge of beds in a flower-garden, and at the same time retain unity. In copying the descriptions and remarks of the writer in the *Cottage Gardener* we will add to his list recommended the following as desirable varieties, to be selected from the numbers catalogued: album Sieboldii, and three varieties of telephium.

"Sedum Californicum.—This fleshy-leaved houseleek differs from the kind so often met with on the tops of low buildings and other places where it is grown for its supposed medicinal properties, as the Californian sedum is of more sturdy habit, and the leaves are all deeply tipped with purplish brown. The plant seems to thrive well in most situations, but likes a dry and sunny one, increases freely, and bears transplanting at any season. It

forms an admirable edging to a small bed, and for places where a permanent edging is required it is extremely suitable. Occasionally it flowers, but not frequently, and when it does, the sturdy stem bearing a head or corymb of flowers is not without beauty. It is less disposed to flower than either of the two following species. In habit of growth it much resembles the common houseleek, the thickly-clustered heads pushing each other out of place, and by degrees rising into a sort of mound. As already stated, it is not particular as to soil, but likes the sun.

"SEDUM GLAUCUM.—Differing widely from the preceding, this low-growing, spreading plant quickly occupies its alloted space, and unlike many others may easily be kept in that line. It is of a pale whitish green color, and looks well all the year round. About the middle or end of May it flowers abundantly, the bloom being of a grayish tint, not by any means unsightly, but rather the reverse when viewed from a distance. The plant prefers a dry situation, and grows very fast, so that when once it has established itself it quickly covers the given space, and it does not seem to die off when it becomes old. Although I have had it in use for several years, I have never known the center or old portion of the plant die off or grow into an unsightly lump; on the contrary, it would preserve its original height of about two inches, and the flower does not rise more than two inches higher. The plant appears to accommodate itself even to the most prominent point of rockwork, where there is only a very small quantity of soil. I have used it occasionally in winter gardening, and the gray hue of the plant was seen to advantage when the soil was dark-colored with moisture. For a permanent edging it is all that can be desired in habit.

"SEMPERVIVUM GLOBIFERUM.—In habit this is more like sedum Californicum, but less robust, and the whole plant is of a deep emerald green, the opening foliage looking like a partially-opened rose-bud. In most respects it resembles sedum Californicum, excepting that it flowers more freely, and the individual flower stems are remarkably sturdy for so small a plant. I believe it is less plentiful than either of the first-mentioned two, but I have had it for several years, and the hardest winter does not take any effect upon it. Like the other members of its family it delights in sunshine and a dry situation, yet with me it is grown in many instances as a permanent edging around small circular beds containing a young specimen pinus or other tree, and for such a purpose it, as well as the other two sedums, is admirably adapted. It may be admired every day in the year, which is not the case with many ornamental objects."

## USE OF GYPSUM IN WINE.

SOME months since a friend presented me with a copy of "Husmann on the Vine;" and after a careful perusal I am convinced that it is a reliable teacher, and based upon actual experience. In the preparation of his work, Mr. Husmann, however, seems to have ignored the existence of European writers; and as I have reason to believe that the experience of some of the most reliable of the Continental observers may prove of value to some of your readers, I propose contributing an occasional communication giving their views, and shall condense as far as practicable the language of the parties quoted. As doctors differ, I shall give both sides of the subject, when I deem such course warranted, and allow your readers to judge of the merits and demerits of the practice.

Our old friend "Horticola" translated

"Mohr on the Vine;" and I trust that he may be induced to favor American vignerons with a translation of "Mohr on Wine," as this scientific and valuable work should be placed within the reach of those who are not conversant with the German language.

The use of gypsum was known to the ancients, and its addition to wine has the sanction of ages. As experience is a valuable teacher, the use of this substance is worthy of consideration, more especially as the fault of the American wine seems to be the presence of too much acid.

The question of adding to an important article like wine a foreign substance is one of moment. This question was recently discussed by the Chamber of Commerce of Montpelier, and the experiments of Chancel, Berard, and Cauvey were referred to. The wine of Castelnau having been made the subject of experiment, gave the following results:

| | Weight of Ashes. |
|---|---|
| Natural wine | 2.048 grains. |
| Wine with pure gypsum | 2.740 " |

| Salts contained in the Ashes of the Wine. | | Natural Wine. | Wine with pure Gypsum. |
|---|---|---|---|
| Soluble | Sulphate of potass | .360 | 1.240 |
| | Carbonate of potass | 1.092 | .040 |
| | Phosphate of potass | .064 | .015 |
| Insoluble | Phosphate of lime and magnesia | .376 | .980 |
| | Alumina | .064 | .064 |
| | Lime | .064 | .064 |
| | Magnesia | .044 | .084 |
| | Silica and sesquioxyd of iron | .080 | .080 |
| | | 1.980 | 2.587 |

These analytical results require explanation. The solid residue of evaporation was burned and the ashes analyzed, as the most simple mode of determining the effects produced by the gypsum; but the results must not be received as given above, for the carbonate of potass represents the supertartrate of potass which was decomposed by the process of combustion, and consequently reduced in weight. The analysis settled the most important point —this was, that wine heated with gypsum contained no new ingredient, and that the gypsum added may be considered *nil*, because it is entirely changed into sulphate of potass.

From the action of the sulphate of potass on the human system, the slight quantity contained in wine so treated can have no injurious effect. The action of sulphate of potass, like tartar, is that of a laxative, and the quantity contained in wine so treated can exert no injurious influence whatever.

Count Odart asserts that if gypsum is used in moderate quantity, there could be no injury from it; but it is often used in the most censurable quantity. According to this writer, at the base of the Pyrenees it is added in the proportion of two pints and a half to twenty-two gallons of wine. It is acknowledged that the effect of the plaster is to preserve the wine from acidity, and to increase the intensity of its color.

According to Dr. Dijon (an œnalogue of standing), the only beneficial effect of the gypsum is to preserve from acidity the wines of the south, which are sweet and saccharine and liable to this degeneration. Wines, according to Dr. Dijon, saturated with gypsum lose none of their good qualities, and may attain a great age, as is evidenced by the wines of Roussillon and Spain; and it would be wrong to call such wines insalubrious on this account, as the small amount of free gypsum they contain is actually less than is found in many springs.

According to the experiments of M. Julien, the wine to which no gypsum was added at the drawing of the vat, was quite acid in the month of August, while that which received the gypsum was quite sound.

M. Bergasse (du Var), a proprietor and wine merchant, and an author of a treatise in which he discusses this subject in a masterly manner, remarks: "I was shocked the first time I saw put in practice a proceeding which seemed to belong to the ages of barbarism, and I even declined buying wine of proprietors who had made use of gypsum. But when I found that wines treated in this way had a more lively and decided color, and that if the presence

of the gypsum could be detected at the drawing of the vats, the peculiar taste which it gave rise tended to disappear in proportion as the lees were deposited; when, besides, I found that after long voyages there remained not a trace of it, and that the wine possessed a fine color and decided softness, I became persuaded that the gypsum, without doubt, produced good effects under certain circumstances."

M. Joigneau, in *La lève de la Ferme*, discussing the wines of the south of France, says that the gypsum should be added at the time of the crushing the grapes, or immediately after. The proper quantity, according to M. Mares, is four pounds to 154 gallons of wine. In Rousillon and Narbonne the coarse, dark wines for mixing—the dearest and most sought after in commerce—have gypsum added to the vat in proportion of from nine to twenty pounds to 154 gallons of wine.

At the congress of vignerons in 1845, M. Baumes stated that good wine to which gypsum was added loses its body and delicacy, becoming hard, sharp, and astringent; that it parches the throat and provokes thirst. He condemned it as injurious to health and conducing to fraud.

The advocates for the use of gypsum, on their part, assert that wine to which it has been added is better, of a more lively color, keeps better, and is every way superior to that without such addition. Such is the positive opinion of M. Mares. Over twenty years since, at the congress of Dijon, M. Cozalis Allut maintained that wines treated with gypsum clarified and kept much better than those which were made without such addition. On the same occasion, M. Baume de Nimes stated that they had used the gypsum at St. Gilles, and since they had done so, the wines of the Cotiere de Vauvert, which were very inferior, were now sought after by merchants; and he affirmed that the gypsum prevented the ascescence of the wine made from the Bourre and the Aramon.

M. Maumene thus expresses himself on the use of gypsum: "Experience shows that the red color becomes stronger the more the contact of the wine with the skins is prolonged; but under such circumstances it is necessary to reduce the activity of the fermentation, and gypsum possesses the power of doing so. It transforms the salts of potass in the wine into insoluble salts of lime and soluble sulphate of potass. This change may be of great importance, because many chemists attribute to the tartar or supertartrate of potass the property of holding the ferment in solution, while the sulphate or potass does not possess this power. Finally, the gypsum very often contains a certain portion of carbonate of lime, and this carbonate, in neutralizing the acid of the tartar, assists, no doubt, to cause the deposition of the ferment which this salt held in solution."

The use of gypsum is an ancient practice, is common on the Continent, and has received the sanction of some of the best authorities, and it seems to us worthy of the notice of American vignerons. To the uninitiated we can most positively state that any compounds resulting from its addition will be found innocuous.

AL FRESCO.

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LONICERA PULVERULENTA. — Of the many varieties of upright tree honeysuckle none are to us more attractive outwardly and dissectively beautiful than the one under the above designation. Its petals are a deep rosy pink with a white edge, that makes it attractive at first; and the more it is viewed, the more beauties are seen. Another year, make sure you have this variety in your group of tree honeysuckles.

## RELATION AND EFFECTS OF POLLEN IN CROSS FERTILIZATION.

Dr. Hildebrand, of Bonn, has lately been conducting some experiments with maize plants and making observations on the apple, to prove the direct influence exercised by foreign pollen on the properties of the fruit thereby produced. In Darwin's recently published work are a series of observations which go to prove that in fertilizing a plant with the pollen of a closely related species or variety, this foreign pollen not only acts on the offspring thereby generated, but may also exercise a direct influence on the shape of the seed vessel and seed of the flower operated upon—a fact previously ascertained by Wiegmann and others, which has, however, been abundantly attacked and criticised of late by Nægeli and others, and rejected as erroneous, but, it may be assumed, without good ground to the contrary. Among the observations quoted by Darwin the following passages occur: "As long ago as the year 1751 (Philosophical Transactions, 1751, p. 206), it was observed that when different colored varieties of maize grew near together, their seeds were mutually affected, and this is now very generally accepted in the United States as an established fact. Dr. Savi (Gallesio Teoria della Riproduzione, 1816, p. 95) carefully repeated the experiment. He sowed yellow and black seeded maize together, and in one and the same cob some of the seeds were yellow, some black, and others speckled, the different colored being either arranged in different rows or irregularly scattered." Without knowing anything of this observation, Dr. Hildebrand experimented with varieties of maize last summer, one with yellow and the other with dark brown grain, and as this trial was most scrupulously carried out, and led to a decisive result, a description of it does not appear superfluous. In the experiments cited by Darwin, we find no guarantee that the plants employed were not raised from seeds which originated in a cross of two different varieties, so that the possibility of the seeds having become parti-colored, independently of the influence of foreign pollen, is not excluded. Foreseeing this probable objection to the value of his experiment, Dr. Hildebrand fertilized some of the flowers of a plant, raised from yellow seed, with its own pollen, and thus saved cobs whose seeds were exactly like those sown. There can be no doubt, therefore, that there was here a pure yellow variety of maize, and not a cross derived from two different varieties. Dr. Hildebrand then raised plants of the pure yellow variety, and fertilized the female ears with pollen taken from a plant of the dark brown variety, similarly raised. The consequence was that two cobs were obtained in which about half the seeds resembled that of the mother plant, or which were perhaps a little lighter in color, while the other half were of a dirty violet color, and scattered about indiscriminately among the others, showing that the pollen from the brown variety had exercised a direct influence. In a third cob, obtained through the same process, all the seeds were pure yellow, but on one side of the axis, between two rows of seed, there was a reddish brown stripe, so that in this case it had even asserted its power in altering the color of the axis of the fruit. All the female heads thus experimented upon were closely enveloped in paper capsules, and only partially opened to introduce the pollen, and immediately closed after each of the numerous applications, so as to avoid all possibility of any grains that might be floating about in the air coming in contact with them. Some other varieties of maize were also tried, but without success in

effecting a union. Pollen from the yellow variety failed to impregnate the brown variety, although the same plant set several cobs fertilized with pollen from the same variety. Darwin alludes to the same phenomenon as observed in the different varieties of apples, to which Dr. Hildebrand adds the following observation: "The year before last he noticed an apple on a branch of the Autumn Calville that stuck out among the branches of a neighboring Red Calville, the color of which for the greater part was the same as the remaining apples of the Autumn Calville, namely, yellow, with small red spots; but on one side, from the border of the calyx down to the stalk, there was a broad red band, just like the color of the Red Calville. Besides this outward resemblance there was also a number of red vascular bundles in the flesh beneath, which is quite characteristic of the Red Calville, so that this part resembled the latter apple in all particulars. This seems to be a case in which the pollen of one variety acted upon the other, for there is no record of any other apples of the Autumn Calville variety with red stripes. For several years in succession Dr. Hildebrand has remarked a similar occurrence on a tree of the Strawberry Apple that was overgrown by a tree of the Red Stettiner, which he is inclined to believe was effected in the same way. In the face of the foregoing observations, and those collected by Darwin, it can scarcely be further contended that foreign pollen does not possess the power of effecting a change in the nature of the fruit resulting from its application, although it is probable that such influence is rarely exercised, or only between very closely related species or varieties. Nevertheless, so few trustworthy observations are on record that it is extremely desirable the question should be investigated further, as every additional proof might serve to convert some of the numerous unbelievers.—*Gardener's Chronicle.*

## INCREASE OF HORTICULTURAL AND AGRICULTURAL INTERESTS.

It is both gratifying and surprising to note the rapid increase and extension of interests connected with the pursuits of rural life. But a few years have passed since the list of journals wholly devoted to Agricultural and Horticultural interests numbered less than a baker's dozen, and they were in the condition of a neglected strawberry patch, literally struggling day after day to keep their heads in sight. Now our list of journals, weeklies and monthlies, in the cause, advocacy, and instruction of the primeval and most blessed occupation of man is almost beyond count; and we no sooner note a new laborer, and get accustomed to his tone, than another appears, until we have lately come to the conclusion that our people have really awakened, and while some may gamble in Wall Street, or other like marts, some may traffic and trade, etc., yet the blessings of a rural life, the prospect which it offers to a long and happy life, are rapidly becoming appreciated. South and West the people seem calling for more and more of reading matter relating to the garden, orchard, and farm, and their calls are met by new papers, and the enlarged size of the older ones, the formation of Horticultural societies, and the records of increased interest at exhibitions of those heretofore organized; all are most gratifying tokens of promises for the future greatness and continuance of our nation, for which we have reason to be thankful to the great Power that overrules and guides all things.

## MAMMOTH CLUSTER RASPBERRY.

BY A. M. PURDY.

SUPPOSED to be a seedling of the Miami. Black, with a rich dark scarlet bloom; extremely large. Charles Downing says: "Very much the largest black raspberry I have ever seen." Globular shape; very juicy and rich; season very late, the first picking being made this year on the same day that the last picking of Doolittle's was made, and last picking fully one week later than the Miami; surface, firm —so much so that they were shipped to the New York market (300 miles) this season with perfect success; bush, very rank and hardy, with but few thorns. Its large size, great productiveness, and extreme late season of ripening, make it one of the most valuable sorts ever introduced, as it fills in a blank season for fruit long felt, especially by the market gardener.

## APPLES FOR THE SOUTH.

WILLIAM SUMMER, in American Pomological Report, says of the cultivation and varieties for the South, as follows:

Fruits were first obtained from the best nurseries at the North and from Europe. The result was that all the winter varieties of apples proved to be autumn kinds, and most of these rotted and fell from the trees before ripening fully. We at once had recourse to the introduction of native seedling varieties, and these were soon found to be admirably adapted to our soil and climate; and so abundant were these varieties that we found difficulty, after we became engaged in the nursery business, to select from so many which were worthy of cultivation. The early Northern varieties almost invariably succeed well; and some of the winter varieties are admirable fall varieties, producing fair and abundant crops. In the mountain or upper regions of this State some few of the best Northern varieties succeed, such as the Baldwin, Northern Spy, and American Golden Russeting.

We give a few of our varieties produced in this State as worthy of general cultivation in the South.

CAROLINA RED JUNE.—This variety, now so generally disseminated, was produced within a few miles of Pomaria, by Henry Suber, and persons came a day or two's journey to get the cions for grafting.

AROMATIC CAROLINA.—Produced from seed by the late Johannes Miller. Medium to large, and very productive; flavor delightfully aromatic, and considered an acquisition wherever cultivated.

AUGUSTINE.—Large, red, rich, pleasant and productive; a South Carolina seedling of great promise.

EPTING'S PREMIUM.—Large, greenish with red stripes, flesh juicy and excellent; received the premium of ten dollars from the South Carolina State Agricultural Society.

EPTING'S RED WINTER.—Large, beautiful red, resembling a fine specimen of Carolina Red June; flesh yellow, with a rich pine-apple flavor; keeps well until Christmas.

LEVER.—Medium; ripe in November; keeps until April. A handsome red apple of best quality; tree remarkably vigorous; produced near Pomaria.

MAVERICK'S SWEET.—Large; ripe in November, and keeps well until March. A seedling produced by the late Samuel Maverick, of Pendleton, South Carolina; well known in Southern nurseries, and worthy of extensive cultivation.

COOK'S RED WINTER.—Medium to large, and of best quality; ripe in October, and retaining its flavor well until April. Produced by Jacob Cook of this district. Tree vigorous and a regular bearer.

HOOVER.—Large, oblate, dark red, juicy, acid, crisp, good flavor; ripens in October; tree vigorous and very distinct. Produced in Lexington District.

GREENING POMARIA.—Large, juicy, rich, sprightly flavor; ripe in November, retaining its flavor until March; produced at Pomaria, South Carolina, and one of the best of this popular variety.

HAMMOND.—Medium to large, color green, flesh juicy; ripe in November, and keeps in great perfection until March; a South Carolina seedling worthy of extensive cultivation.

FERDINAND.—Fruit large, pale greenish yellow, flesh tender, ripe in November and keeps well; a seedling of Pomaria, worthy of a place in every collection.

SUSANNAH.—Large, oblong, oval, greenish yellow; flesh crisp, with a rich aromatic flavor; ripens in November and keeps till April. Premium apple of the State Agricultural Society 1859; produced at Pomaria.

CRAYTON.—Medium to large, fine flavored; ripe in November and keeps until April.

There are many other varieties; among them, Gore, Champagne Crab, White Crab, which are worthy of general cultivation; but our limits will not admit of even brief descriptions.

# EDITOR'S TABLE.

TO CONTRIBUTORS AND OTHERS.—Address all Communications, for the Editorial and Publishing Departments, to F. W. WOODWARD, 37 Park Row, New York.

## POULTRY.

F. W. WOODWARD, ESQ.: *Dear Sir*—My communication in the August number of the HORTICULTURIST, upon the subject of Brahmas, grew to such dimensions as to influence me to omit some paragraphs of commendation which I desired to incorporate at that time. But, sir, allow me to say that the Brahma is a pretty "big thing," and that its *merits*, like the *bird itself*, can not be conveniently dissected and dispatched at a single sitting. You will remember that in the conclusion of my article I gave a very brief extract, from the London *Cottage Gardener*, referring to the popularity of these birds in England. I beg now to quote a paragraph from the same journal, touching the merits of this well-tested and popular variety.

"Every frequenter of our poultry shows must have noticed the gradual and steady increase, from year to year, in the Brahma classes, showing a correspondingly steady growth in the popularity of the breed. In fact, no breed of fowls has made such rapid progress of late years; and with an utter absence of anything like 'mania,' this is a sure evidence that great and real merit is at the bottom of it; and such is certainly the case. As layers, Brahmas are in the very first class; as table fowls, they are much better than Cochins, though

not equal to Dorkings; and as sitters, while their behavior is unexceptionable, it may safely be said of them that the propensity to incubate occurs just often enough to be reliable and useful, without being troublesome. Such merits are quite enough to justify their great and growing popularity; and the more so when combined with the very strongest constitution, and capacity of bearing confinement, of any fowls we know of. It is these solid and useful qualities that are bringing the breed so rapidly into repute, and recommending Brahmas most strongly for family use, as the chickens may be reared with facility at any time of year."

Assuming, now, that I have said enough relative to this specific variety, I will conclude this article by attempting to give you the results of a portion of my experience and observation in the management, feeding, and diseases of fowls; and this experience dates back for considerably more than a quarter of a century.

In selecting fowls of any variety for breeding purposes, the prime object should be to get those with the best and most clearly defined characteristics of their specific kind, and to get those that have strong and large bones, with broad backs and full breasts, and standing firmly and squarely upon their legs. Be sure to get *symmetrical* and *harmonious proportions;* and don't sacrifice these to any fashionable clamor for either *short* or *long* legs, to *heavily-feathered* or *slightly-feathered* legs, or to any of that epidemic nonsense which sometimes sacrifices *form* and the *highest developments of beauty* to the demands of a crotchety judgment or the whims of a crude and uneducated taste. Remember that large birds, like the more spacious and pretentious edifices, must have *broader* foundations and *stronger* framework to give solidity and force, and *loftier* pillars to add grace and dignity, than the more diminutive and humble. And with birds *right in form, robust in health, strong in bone,* and *true in characteristics,* there will be, generally, not only *success* but *pleasure* in the poultry-yard of the appreciative breeder.

Being fully satisfied that poultry, like animals and men, degenerate from "in-and-in" breeding, I have always made it a point to select cocks and hens as remotely related as possible for breeding together. I have generally allowed upon my yards an average of ten or twelve hens for each cock, and my success has always been so satisfactory as to excite no desire to depart from this habit. Mature cocks and hens produce larger and stronger chicks than those which have not attained to the highest force and vigor. Spring pullets, of the Asiatic breeds, will commence laying, generally, by the time they are six months old, and if well cared for they will lay through the winter. Good health and fair condition in hens is indispensable to the production of eggs in winter. A Brahma pullet's eggs will weigh from two to three ounces each, and to produce these from day to day, and to supply the waste of nature, demands something more than a snow-bank or the rarefied air of winter; but this is about as much as some people concede to their poultry. I am fully convinced that the ground (whether under cover or otherwise) is the best place, after the winter frosts are over, for hens to make their nests and sit. A certain amount of moisture seems to be needful for the eggs while in process of incubation, and this necessary moisture is supplied from the earth, which supersedes the customary sprinkling which many persons give to eggs under sitting hens. Hens which make their nests upon the earth are not annoyed by vermin, as is too often the case with those which have been put to sitting in boxes and baskets. I generally put thirteen eggs ("there's luck in odd numbers," you know) under a medium-sized hen, while hens of large size can easily cover fifteen. It is said that the *sex* of eggs may be ascertained by holding the egg to a lighted candle, in a

darkish room or other place, or before rays of sunshine through a crack or chink, with the large end uppermost; if the air-bladder is at the *top* of the large end, the chick is a male; and if at the *side* of the large end, it is a female. It is not difficult to determine the *fertility* of eggs after they have been sat upon for four or five days. To explain: after the hen has been sitting five days, take a lighted lamp (or use the sun-light, as referred to above) into a dark room, and holding the egg near to the light, between the thumb and forefinger of the left hand, and making a sort of telescope of the right hand, with the eye at one end and the egg pressing against the other, no light will be admitted except through the egg. If it is fertile, streaks of blood will be distinctly seen in the yolk; if the egg is quite clear, there is no vitality in it. It is well to know this fact,—for where two or more hens have been put to sitting at the same time, all the unfertile eggs may be removed, the vital ones consolidated, and a fresh clutch substituted under one of the sitters. Hens, whether sitting or laying, require *dust-beds* (these are their bath-tubs), in which they may disport themselves at will, and cleanse themselves from the annoying parasites which sometimes infest their nests and roosts. When confined to circumscribed quarters, hens should have burnt or broken shells and bones, lime and gravel, for these are indispensable to the formation of the shells of their eggs, as well as to the preservation of their health.

I have a native fondness for poultry; and the leisure moments which I sometimes devote to them are given more for the *pleasure* I find in them than for any *profit* which accrues in their management. I am in the habit of feeding my adult fowls regularly and abundantly twice a day; the chicks are fed oftener, or food is so placed that they have access to it whenever the cravings of appetite prompt them to seek it. An ample run, the larger the better, with a stream of running water, is best, as well for the health as the growth of poultry. Young chicks should be fed very early in the morning, so as to obviate the necessity of their wandering about through the high and dewy grass in search of something to appease their hunger. I believe it is now a generally conceded point, that feeding chicks upon the dough of Indian meal, and permitting their mothers to drag them at will through the high grass and the chilly dews of morning, are among the main producing causes of gapes, a disease which annually carries off multiplied thousands of them.

In this connection permit me to give two or three recipes for gapes, which are said to be very efficacious:

1st. "To kill the worms in the wind-pipe, which cause gapes, administer *pills of camphor*, about half as large in size as a garden pea. These pills should be administered one at a time, eight hours apart, till the chick is relieved. In slight cases, cures may be effected by giving the chicks water strongly impregnated with camphor."

2d. A writer in the London *Cottage Gardener* says a sure specific for gapes is found in "Twenty grains bol. armen., twelve drops spirits of tar, and one ounce of cochineal,—to be divided into pills of the size of a peppercorn, and given when the first symptoms of the disease appear."

3d. "Pour a small handful of wheat into a vial of turpentine, and let the same remain for twenty-four hours; then give a single grain, night and morning, to chicks affected with gapes. A single grain, in slight cases, will sometimes effect a cure."

The disease called Roup is one of the most common, and perhaps one of the most fatal diseases to which our domestic fowls are incident. My opinion is that it originates from sudden atmospheric changes, or by carrying fowls from the protection of comfortable rooms into exposed positions, thereby superinducing colds of greater or less malignancy; these

colds, if neglected, frequently terminate fatally. My reason for this belief I will state. Winter before last I purchased in this city a pair of large and healthy-looking fowls. I took them from the warm quarters where I found them and put them into a comparatively open house. In the course of two or three days I observed that the cock had a sort of rattling and discordant crow, which indicated trouble about the throat or lungs,—twenty-four hours thereafter he ceased to crow at all. Hereupon I took him in hand, washing his throat with a solution of strong alum-water and then giving him a large bolus of flour of sulphur and lard. I repeated this remedy two or three times, when his voice returned, and in three or four days he was well again. By the time the cock was restored, the pullet was attacked with the same disease, but more malignantly. Her head was swollen, her eyes running, with heavy fever in the head, and cankered mouth and throat. I washed her head and throat with castile soap and tepid water, then rinsed her mouth well with alum-water, and gave her a tablespoonful of sulphur and lard thoroughly mixed. This treatment effected a cure in about a week, but the hen was feeble for weeks after. Others of my hens became affected, when I recalled the old adage, that "an ounce of prevention is worth a pound of cure;" so I went to work and put a quantity of sulphur in one of their drinking vessels, and in another about a half pint of tar; from these vessels my fowls had to take their daily draughts. At this point the disease was arrested, but whether by the preventive means employed, or otherwise, I can not say.

Not a great while since a Mr. Lockrow, of Conn., stated in one of the agricultural journals, that "burnt borax, wetted up with water, and applied once a day, for three or four days, to the inside of the mouth of a fowl affected with canker, is an infallible remedy." E.

F. W. WOODWARD, ESQ.: *Dear Sir*—In the August number of the HORTICULTURIST I notice an article upon Brahmas, in which the writer assumes that the Brahmas are the fowls most worthy the attention of farmers and fanciers, and places them at the head of the list.

Now, with all due respect to the writer, and acknowledging the Brahmas to be very fine and popular birds, I propose to say a few words upon the *Houdans*, which are birds of no ordinary merit, and are destined to become among the most popular fowls of the country.

This valuable breed of fowls, derive their name from Houdan, a town in France, and are also natives of that country, where they are raised in large numbers for market. Their rapid growth and fineness of flesh commend them as table fowls of the highest excellence.

They have very broad and full breasts, with large, white or white-shaded legs, with five toes (although they sometimes come with only four); plumage, invariably black and white, spangled; crest of same color; tail, full and ample, well sickled, and carried rather erect; comb, two-horned in shape, slightly sprigged at the base, and in the cock showing well in front of crest; strongly developed whiskers and beards in both cock and hens.

In the spring of 1867 I imported a trio of these valuable birds, and although having but a small yard in the city, with not a sprig of grass, they furnished me with a good number of large white eggs, which I intrusted to the care of others for hatching and rearing. They succeeded, for various reasons, in raising but few.

This year I have kept the two imported hens and three pullets, and although I have not kept an exact account of the eggs laid, I venture to say that no hens could have laid more or better eggs.

With the exception of eggs sold, I have set them myself, and found them almost invariably fertile. (I will say here, that out of six eggs sent to Illinois, five hatched.)

The chicks, when hatched, look exactly alike; and says one writer: "The Houdan chickens are very pretty when in down and first plumage. The neck, back, and wings are black, the breast and under parts white. From the very first they are lively and hardy, feathering very early and maturing with marvelous rapidity."

I have not had a sick or feeble chick this season, and in my fifteen years' experience in breeding poultry never saw chicks grow so fast.

The Houdans, taking them all in all, are among the very best breeds of poultry for all purposes, and can not fail to be highly prized by those that possess them.

P. W.

TAUNTON, MASS., *Aug.* 17, 1868.

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EDITOR HORTICULTURIST: In the June number of the HORTICULTURIST I observe that Dr. M. A. Harding, of Vernon Co., Mo., is of the opinion "that they have in that climate a dryness of atmosphere greater than any other of the States." If Dr. H. had accompanied me in a recent trip, 300 miles west of here, on the Pacific Railroad, he would have changed his opinion, at least so far as a portion of Kansas is concerned. If grapes do better in dry climates, then western Kansas is the banner spot of *all* the States. I was told by the employees of the railroad that but two light showers visited them this summer. In traveling a distance of twenty or thirty miles, in many places as far as the eye can reach in the dim distance of the horizon, you will scarcely see a tree or shrub. In other places, along the margins of creeks that empty into the tributaries of the Kansas River, you will often see narrow groves of verdant forest trees. Here and there are seen the "dead carcasses" of the buffalo scattered over this vast plain, while the smaller inhabitants are the elk, etc. Thousands of acres are covered with the towns of the prairie dog, an innocent-looking little animal nearly as large as the common rabbit; but they have no "lugs" over their ears. One of our company shot at one, the ball passing so near that it stunned the poor animal, by which means it was captured.

I brought home with me some of the soil of this region, and comparing it with that of the valleys here, I can not help but think it just as fertile. The railroad track runs along a ridge for a great distance, yet, where the soil had been stirred in building the railroad, I found corn, that had been dropped accidentally by teamsters, growing luxuriantly. The weeds under similar circumstances were as healthy as in our own cultivated fields.

Without occupying space in giving reasons, I would say that I am inclined to believe that all the authors, traveling correspondents, etc., who have pronounced this region to be a "barren waste," "a sandy desert," "arid plains," etc., are entirely mistaken. That this region is destined some day to become one of the greatest agricultural and grape-growing regions of the United States, I have no doubt, notwithstanding the hundreds of travelers whose opinions I have read all believe to the contrary. My observations were principally made at the stations where we "laid over" sometimes an hour, too short a time, it is true, to examine the country thoroughly, but sufficient to form an opinion. If the managers of this railroad studied their own interests, they would send a "free pass" to every agricultural and horticultural editor in the United States, and make provision to board them while traveling. In this way would the great natural resources of this broad, fertile plain become known to those wanting homes, and soon their lands would be worth ten times their present value,—but that is their business, not mine.

At these stations there are "piled up" thousands of cords of wood, hauled many miles from the streams; here also are the water pumps, operated by horse and wind power. The depth of the wells is from fifty to one hundred feet. At one place

they had dug two hundred feet, but found no water; these wells, you must bear in mind, are on the highest portions of the plains, the ridges dividing the valleys; in lower land, no doubt but that water could be obtained nearer the surface.

Now, what is to be done with these broad prairies? Even in this immediate region the time has come when, as A. S. Fuller says, "growing forest trees requires not only agitation, but action," and our people are planting them. Then let strong arms seek these plains, and with the prairie plow stir the soil, plant 160 acres of forest tree seeds on every section, plant orchards, vineyards, etc., and in seven years there will be plenty of timber. It will not require a lifetime (as it does in the East) to produce good-sized forest trees on the rich soil of the West. In the mean time your herds of cattle can be pastured, and you can raise corn and other grains to support yourself. If necessary, you can dig wells and put in wind or horse power pumps and throw water over your farm. When the forest tree seeds grow, the climate will be the most delightful on earth. Your readers know the effect that trees have upon climate. My belief is that from the start the farmer could succeed in growing grain, but the benefit that the planting of trees would be to this country could not be estimated in dollars and cents. The United States Government would give 160 acres here to the settler who would live upon the land five years; and I have no doubt the railroad company would give an equal quantity, reserving one half to the company; but 160 acres there, in five years, with the trees growing that one man could plant, would be an independent fortune for the hardy pioneer who would settle thereon. Whether this broad expanse will, in our day, be dotted over with groves of forest trees or not is not for me to say; but of one thing I feel certain, and that is, at some distant period this region will be the garden spot of America, and above all other places the home of the vine. I care not for the report of a young army officer or a careless newspaper correspondent who, weary and thirsty, have hurried over these plains, their whole thoughts being, "how soon will we reach the end of our journey?" Such men know very little about the capacities of the soil either for grain or fruit; and not even having an opportunity to have seen the scattered stalks of corn growing where the sod had been removed, or to observe the rank growth of different species of weeds, and at best but superficial observers in such matters, they have sent out to the world the idea that these plains are barren, and that nothing can ever be made to grow thereon; but such, Mr. Editor, is not your correspondent's opinion, although I have never found a man or seen the statement of any writer that will agree with me in this matter; and if I am the first to give publicity to the above views of the fertility of those plains, I will willingly bear any odium that may be thrown upon me in case of a mistake.

Yours truly,

A. M. BURNS.

MANHATTAN, RILEY CO., KANSAS, *July* 14, 1868.

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LET US KNOW WHERE YOU LIVE.—EDITOR HORTICULTURIST—*Dear Sir:* Now that the subject has been revived again, in your August HORTICULTURIST, may I have room just to second the very wise suggestion of Mr. Yeomans, in the June number, that correspondents giving their experience with fruits or plants should give us also their *residence* or *locality?* In a land as broad as ours, with such a wide diversity of soils, and subject to such ever-varying conditions of season and climate, the great object in our fruit culture must be to adapt our selections to the sections suited to them; and whereas it is a truth of almost every-day experience that a kind which proves most desirable in one place may be comparatively worthless in another, the question of *locality*, in all criticisms upon the

success or failure of a certain variety, becomes one of the first importance. No doubt the simple facts that Mr. A—— or Friend B—— finds this apple the best for his market, or that cherry to bring the largest returns, or some few varieties of grapes to be the healthiest and most productive, are all of interest, and add just so much to the reputation of the varieties recommended; but does not this, after all, leave us in the dark on one of the very essential points of all, and fail to answer the first question that a practical man would ask, namely: What are the *localities* and conditions in and under which such fruits can be successfully grown, so that he may adapt the experience to his own case, and follow or modify it as circumstances require?

The objections presented to giving the full address are clearly well founded; but why not let the *locality* be given, which, to our mind, will meet the great wants of the case, and conceal the address under such a *nom de plume* as shall be an effectual shield from all the dreaded array of circulars, inquiries, and *bonus* communications, to which your humble servant is no stranger.

By the way, would not H. T. W. have expressed his point full as well if he had headed his article in your August number, "Is strawberry NEGLECT a success?" He well says, after giving the particulars of some cases of loss on a few crops, that "that this ill success comes simply from neglect and inferior culture (which is NOT culture) rather than from over-supply." If such treatment has ever brought success since the decree went forth, "In the sweat of thy face shalt thou eat bread," we are constrained to believe that the cases must have been very exceptional; and we are equally of the opinion that a good crop of strawberries, or any other healthful fruit of the best varieties, carefully gathered and assorted, and judiciously handled, will never fail to bring a *paying* price, which of course must vary to some extent with the season and state of the market. Oversupply of such fruit there never has been, nor will there be, in our opinion, as long as the American people are wise enough to esteem, as they seem to now, fresh ripe fruits and heaven-painted flowers among the most grateful and healthful blessings given to make glad our sin-stained world.

OLD CASTLE.

GENEVA, N. Y., *August 20th*, 1868.

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F. K. P., BLOOMINGTON, ILL., asks us to tell—1. What are the very best pears on quince? Also those most valuable as standards, if there are any new or noteworthy not set down in the books?" 2. Also, "What is there new or noteworthy about cherries and grapes?" He also asks: 3. "How have Wilson's Early and Kittatinny blackberries proved in fruit this year?" 4. "What new raspberries promise best?"

[1. So far as relates to anything new in pears on quince, we have not a word; for as "one swallow does not make a summer," so neither do one or two seasons of success in fruiting any variety of fruit on a foreign stock prove anything as to its value. As we now stand, the Beurre d'Anjou, Doyenne Boussock, Louise Bonne of Jersey, and Vicar of Winkfield are about the only really and truly tested reliable sorts on the quince. True, we have good records of Stevens' Genesee; better, perhaps, of Saint Ghislain or Beurre Diel; most undoubtable authority that Duchesse d'Angouleme is the only one fit to have a quince root for its base. Again: equally good authority gives us Sieulle, Duchesse d'Orleans, and Onondaga as undoubtedly successful *permanently* on the quince root. As the definition of durability or permanency is one that in defining requires the object to which it relates stated, we shall leave you to apply it. The most valuable standard sort of cultivated pear, according to John J. Thomas, in the *Country Gentlemen*, is the Buffum, because of "possessing all the vigor and endurance of the old wild sorts." This is good authority,

and the author has taken a good type as well as a proven tree; but, nevertheless, we would not hesitate to plant trees of Fulton, Mary, Merriam with just the same confidence in them, so far as destruction by blight or climatic influence would result.

2. We know of nothing really new or noteworthy in cherries. One or two seedlings shown at the Cincinnati Horticultural Society, and two spoken of by Mr. Elliott, of Cleveland, are all on our record of the season. Your question of grapes is too soon for reply. With exception of the old vineyards about Cincinnati, the report promises a more than average crop, and with less of rot or mildew. Mottled, Iona, Israella, Adirondac, the Rogers' numbers, etc., etc., are all fruiting finely East and West; and if nothing happens, we may look this season for the greatest show ever had of grapes in old and new varieties.

3. The Kittatinny Blackberry is, so far, a success—the best yet out. Wilson's has too hard a center for family use, but is showy for market.

4. The Naomi promises, from all we can learn, as the best among reds; while Arnold's No. 1 stands high as a hardy caned white or yellow fruit. In black caps, or that class, Ellisdale, Surprise, Mrs. Wood, and one or two more, are highly spoken of by good horticulturists.]

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SEEDLING PINKS.—A friend recently called our attention to his bed of seedling pinks, claiming them among the most beautiful ever grown. An examination satisfied us of the correctness of his statement, as we found blooms large, compact, and regularly round in form; some with fringed petals, others without; some almost black, so dark was the shade of rich crimson; some pure white; some creamy yellow flaked with lilac purple; one with the edge of petals deep rich crimson shading down to a light rose color at the base; one, delicate light salmon, with a broad, deep pink stripe from outer to inner edge of petal. There was not a really poor flower in the lot. The success and uniformity of good flowers obtained by our friend he attributes to the "very superior character of the seed, which he obtained of James Vick, Rochester, it evidently having been gathered by some careful and judicious hand from good stocks, and not as the majority of seeds are, from any and everything having seed." Of this we have nothing to say, only to add our item of testimony to Mr. Vick's general reliability; but certainly we never saw a much better collection, even of named sorts, and therefore put the case on record.

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NEWBURG BAY HORTICULTURAL SOCIETY.—The eighth annual exhibition of this Society will be held at Newburg, September 29th and 30th. Premium list can be obtained by addressing D. Smith, Esq., Newburg, N. Y.

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EDITOR HORTICULTURIST: Can you give me any information about the "Miner Plum?" Some one has said it is not injured by curculio. Perhaps this is the kind after all. A SUBSCRIBER.

CORDEN, *August 5th*, 1868.

[The Miner plum is a seedling of a wild variety, originating at or near Lancaster, Wisconsin. We have our doubts as to its being curculio-proof in sections where the curculio abounds. Other wild plums, with equally thick skins, are not so. We have not been able to fruit the variety in this locality yet, but hope to do so next season. See November HORTICULTURIST, 1867, for illustration and description.—ED.]

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THE NIGHT-BLOOMING CEREUS.—In October, 1846, Mrs. T. W. Williams brought from Avon Springs to New London a slip from a plant of the cactus species, then comparatively rare in our country—the Cereus grandiflorus, or Night-blooming Cereus. It was a mere stalk, about six inches in length. After nursing it for some time, and finding the heat of her

conservatory insufficient to bring it to the flowering point, she transferred it to the green-house of Mrs. H. P. Haven, where it still remains, and has bloomed regularly every year. It now fills a large box with its roots and stems, and has five or six main stalks that are nearly three yards each in length.

In its first years of bloom it bore only a single flower, and its opening was generally watched with great interest. July 28, 1851, the expanded blossom was visited by some seventy or eighty persons. In 1854 the number of blossoms had increased to *six*. In 1857 it had *ten* in all, and *eight* of these appeared in one evening, all unfolding together with artistic precision. In 1859 there was a still more beautiful exhibition; July 22, *twenty* full blossoms were expanded at once, shooting from different parts of the square stems and presenting a magnificent display of floral beauty. Notice having been given to friends and neighbors of this expected show, it was witnessed by a throng of admiring visitors, and accounts of it published in the local papers of the day.

This is the largest number of blossoms that the plant has exhibited at any one time, but the whole number produced increases rapidly from year to year. In 1866 it developed about sixty blossoms, spreading over a period of five weeks. The present year (1868) it has exhibited a much larger number, furnishing a series of splendid shows. In one evening *nineteen* blossoms were displayed, *eighteen* at another, and again, some days later, *fifteen* in one evening and *seven* in another, with lesser numbers at other times, amounting in all, between July 9th and August 12th, to *eighty*, and not an imperfect flower among them, or a bud that failed to mature and expand. F. M. C.

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Seeds of Cherries. — C. G. Patten, Charles City, Iowa: Your request for information as to where seeds of Louis Philippe and other choice Morellos could be obtained, came in due course. As our suggestion was original, we have no knowledge of any person having saved seeds to meet its requirements. We advise you to write to Charles Pease, Esq., East Rockport, Cuyahoga Co., O.; F. K. Phoenix, Bloomington, Ill.; and James Vick, Rochester, N. Y., relative to securing seed for another season.

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Dogs!—F. W. Woodward, Esq.: *Dear Sir*—In glancing through the pages of the London *Cottage Gardener* to-day, my attention was arrested by an article from a writer styling himself "Wiltshire Rector," entitled "My Dogs." A perusal of this article afforded me so much gratification, and was in such accord with a portion of my own experience, and at the same time paid such a kindly tribute to this much abused but most intelligent and faithful friend of man, that I determined to copy a few of its paragraphs and submit them for your approval, and the perusal of your readers, if they are deemed worthy and appropriate for your pages.

In almost every country, and from the earliest recorded history, the dog has been the symbol of *fidelity*, the friend and companion of man, and the guardian and defender of his home and his flocks. He has illustrated his *fidelity*, his *sagacity*, and his *courage* so often, as to rear monuments in nearly all nations to his honor; and to win the patronage of many noble and gifted minds. It will be remembered that Alexander the Great built a city in honor of a favorite dog;—that the Emperor Hadrian decreed the most solemn rites of sepulture to another on account of his sagacity and fidelity. Those who have once read them will readily recall Byron's inscription on the tomb of his favorite dog, in Newstead Abbey.

"—— poor dog, in life the firmest friend,
The first to welcome, foremost to defend,
Whose honest heart is still his master's own,
Who labors, fights, lives, breathes for him alone:
To mark a friend's remains these stones arise—
I never knew but one, and here he lies."

The love of Scotland's great novelist and

poet, Sir Walter Scott, for dogs is proverbial—and he was rarely ever seen about home without having one or more of these faithful and attached friends by his side.

The dog is the only animal which seems to take a real delight in associating with man and making himself subservient to his wishes, and that has gone with him over the whole habitable earth. The poet Burns says: "Man is the God of the dog—he knows no other; and see how he worships him! With what reverence he crouches at his feet—with what delight he fawns upon him, and with what alacrity he obeys him!"

But in my admiration for this disinterested and intelligent friend, companion, and servant of man, I find that I am growing unnecessarily voluble, and will yield to the extracts from "Wiltshire Rector," premising, by the way, that a good dog can show himself up to much higher advantage, with opportunity, than even the partial friends who herein commend him.

"Reader, if you have never read Dr. John Brown's 'Rab and His Friends,' the best bit of dog literature ever written, go out and get a copy; it will only cost you sixpence, and you will thank 'Wiltshire Rector' with eyes running over with happy tears, for introducing you to that wonderful 'bookie,' and for giving you an hour's intense pleasure, to be renewed as often as you read it.

"Well, Dr. John Brown tells us, 'A dog in a house is a perpetual baby.' Think of that, ye whose hearts are yearning to love something—think of that, ye now not young fathers and mothers, who remember the joy in the house that baby No. 1 gave you from the first hour of its baby life, until baby No. 2 took its throne and reigned in its stead. But to have a perpetual baby—a toy—a plaything—a something knowing much, yet not judged accountable, and so a large margin given to do as it likes, and all it does gives you pleasure! A perpetual baby—that is, a dear good dog, who looks at you with intense loving eyes, all affection in their clear hazel, brown, or black depths—a being who obeys you implicitly, waits for the hour at the door of the house at which you call—a being who loves you just the same whether you are rich one year and very poor the next—who into the bargain takes upon him to defend your house, your home, your castle; and if you have no home, he does not leave you—no, he all the more defends you, yourself, as much as to say, 'Cheer up, my poor unfortunate master; you have got no home for me to take care of; never mind, I will concentrate my attention—I will watch and take care of *you*.' Yes! a good affectionate dog, to whom you are everything, who loves you with his great affectionate heart. Of such a one the old proverb ought to be strictly kept true, 'Love me, love my dog.'

"Dog and man, how suited they are to each other! And how they contribute to each other's happiness! as in a happy marriage each party is made the happier. Man has not domesticated or reclaimed any animal so perfectly as he has the dog, for the dog does not even wish for liberty. His feelings are won over. He is no longer, as naturally, a gregarious animal. He passes by other dogs with a brief 'How do you do?' but he knows better than to forsake man and herd with his species—unlike the horse, who kicks up his heels in the pasture and fain would not again be stabled. But the dog does not even wish to be free. Man has raised him in the scale of existence. He is more sensible, intelligent, and sagacious than his wild ancestors (half wolves, perhaps). His heart has been won, and his heart is better since it was won; so he no longer wishes—even wishes to be free.

"The first dog I loved was scarcely mine, for I was rather his property, for certainly I was much his inferior. My childhood's home was one which for many years never lacked an infant within its walls, and each little one was duly presented to

old 'Keeper,' for that was his name, who sniffed and sniffed, and licked the tiny thing's face, and looked as if he knew all about it; his old brown eyes saying, 'Ah! I understand! That child belongs to the house, and I'll take care of it—all right!' And he did. Keeper romped with it, kept it happy and out of mischief, save mischief with him, such as putting its tiny hand in his mouth and poking straws up his nostrils, both deeds permitted with good-humored patience." E.

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PEACHES AT THE SOUTH.—P. J. Berckmans, one of the best of our Southern pomologists, says of the peach in the American Pomological Society's Report as follows:

"This fruit *seems* to be indigenous to the soil, as it is everywhere found in abundance, and of most vigorous growth. Except the borer, the tree is free from insects, or any disease whatever. The former can be easily guarded against, by hilling up the trees with earth early in the spring, leaving this cone undisturbed until November, then leveling off again, and repeating this operation yearly. The hard bark of the trunk of the tree prevents the insect from puncturing it and depositing its eggs. Orchards thus treated have been free from borers for years past. The curculio has, however, of late been very destructive to our fruit. Heretofore, it only attacked the nectarines and some peaches of very delicate skin; but the past year, no variety, however downy, was free from its depredations.

"The Yellows are unknown here, and it is a remarkable fact that a contaminated tree brought from the North regains its vigor as soon as transplanted here. Immense quantities of peaches are raised for distilling and drying, and the supply of New York market. This latter feature of peach-raising has again been revived, and from present appearances bids fair to become an important and lucrative business along the main railroad lines, and especially in the lower portion of the State. Peaches grown in this section can be laid down in New York seventy hours after being gathered, and will net a handsome profit to the cultivator. For this special purpose, early varieties alone are advisable to plant; so that the bulk of the crop is sent off before Delaware and Maryland fruit is ready for market. The best varieties for shipping are Early Tillotson, Large Early York, Early and Late Crawford, Stump the World, and Columbia. Hale's Early bids fair to be the most profitable kind, but has not been sufficiently fruited to enable me to give a decided opinion as to its shipping qualities. We have early Southern varieties vastly superior in quality to most of the above, but they are too tender in texture to stand carriage. Clingstones are unfit to carry to distant markets. They can only be appreciated to their full extent when picked from the tree fully ripe. The country abounds with seedling peaches, the bulk of which is inferior; but as there are several types of peaches which reproduce almost identically by seed, there are large orchards of seedlings, every tree being nearly alike and of good quality. Such are the Indian, Lemon Cling, Heath types, etc.

"Of the Indian types there are many varieties; some are yellow freestones, like the Columbia; others, blood-red clingstones or white clingstones; all, however, have the peculiar brown red stripes upon the fruit, which characterize the type. This type is much esteemed, as it seldom produces an inferior peach, and, strange to say, it seldom hybridizes with other varieties. The Lemon Cling type seldom varies by seeds; it never produces a freestone, but ranges from pure white to dark orange flesh; and this is always red at the stone. The Heath type, known here as White English, is very popular; its varieties are numerous, but all have a family resemblance, and are white to the stone. In general, all the clingstone species, whose flesh is white through, are sweet; and those

being red near the stone, subacid, or even acid. For distilling, the clingstones are preferable, as they yield more juice than the freestones. Three bushels of good clingstones will yield, on an average, one gallon of proof brandy, whereas the bulk of freestones will not yield over one half that quantity.

"The peach will produce the second year from the seed, and when properly cared for, will live twenty-five to thirty years. The great fault with most cultivators is, that they allow the trees to overbear upon the extremities of the branches, the weight of the fruit causing these to split and break off. Annual shortening-in is of the utmost necessity, and unless this is attended to, the peach-tree will soon decay. Spring frosts are often very destructive. As a preventive, it is the custom to build fires in the orchards, so as to create a dense smoke. By this means many crops are saved. The season of maturity begins June 10th to June 15th, and some late varieties keep until the 10th of November, a period of nearly five months."

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TRAINING GRAPES.—Is there any objection against the training of the long arms of grapevines (in the vineyard), pruned according to the annual renewal system, very low, say within one or two inches of the surface? Then the shoots being annually cut off an inch or two from these arms in the fall would much facilitate the covering of the vines with earth for winter protection, as I have ever found it hard, or impossible, to bend old vines.

Delaware and Concord grapes flourish splendidly on the Ottawa. Also, White Sweetwater will ripen here eight years out of ten. No mildew or diseases of the vine or grapes are known here.

An answer to the above query in the HORTICULTURIST will oblige,

Yours truly, J. F. CASS.

L'ORIGINAL, CAN.

[We see no objection to training the horizontal arms of the vine within six inches of the ground, except that of its placing the fruit so near the ground as to cause it often to be bespattered with dirt. Our idea of *annual* renewal system, however, is evidently very distinct from yours. We cut away each autumn all the old two or more years' old wood; and as our young canes have been started and grown from eyes two to six inches from the surface-crown of the root, there is no trouble whatever in laying down the young cane. We are glad to hear you are exempt from all diseases of the vine. May it ever be so with you.]

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LACHENALIA TRICOLOR.—Amidst the numerous varieties of bulbous-rooted plants that adorn our green-houses during the earlier months of the year, few deserve or are better entitled to the gardener's attention than the one named above. Their beautiful spikes of trumpet-shaped red and yellow colored flowers, whether intermixed with other plants or otherwise, are sure to be attractive. Unlike the hyacinth, narcissus, etc., they do not require to be purchased annually, that sound and good flowering bulbs may be secured, as the Lachenalia increases every year in number and strength, if the grower will bestow some degree of care. It is time now to turn them out of the pots in which they flowered in the spring, and to re-pot them for next season. In sorting them, the stronger bulbs are selected, and five of each planted in a six-inch-size pot, commonly known as 32's. Good drainage and clean pots are indispensable. They thrive best in a strong loam (not clayey), but of a silky or soft texture; add to this about a fourth part of dry, rotten manure, with a little sand. If the manure be decayed cow-dung, so much the better, provided it is free from worms. They should be placed in a cool pit, the object being, in the present stage of their growth, to check too rapid an evaporation in the soil, as frequent waterings, when there is not an abundance of rootlets to absorb the

fluid, is an injury alike to the plant and the soil. When they have begun to vegetate freely, expose them more fully to the light and air; their rich, dark green speckled leaves will then soon begin to strengthen in growth. That a healthy vigor may be preserved during the winter months, place them on the upper shelf of a green-house, near the glass, but do not neglect carefully watering them. As the flower-spikes become perceptible, allow the pots as much room as your means will admit of for the display of their vigorous foliage. During the blooming season, shade on hot, sunny days; this will preserve the color as well as the flowers. When they have ceased blooming, gradually ripen the bulbs by reducing the quantity of water, till you wholly discontinue the supply, when they may be put in any corner of the green-house till the period of disturbing them as above recommended. The offsets or smaller bulbs may be planted, ten or twelve or more in number, according to their size, in a five-inch or 48-sized pot; they will not all flower, yet you may increase your stock of strong-flowering bulbs for selecting from in the ensuing season. The Lachenalia will submit to be forced, but it is at the expense of weakening both the bulb and the flower-spike.—*Gardener's Magazine.*

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The Farley Blackberry.—Mr. A. M. Burns, of Manhattan, Kansas, writes us regarding a blackberry which he has known some years as the Farley. Its origin and history seem untraceable, beyond its having first been received by Mr. Burns from a friend in Pennsylvania, who obtained it of a man by the name of Farley. Mr. Burns states it to be "not quite as large as the Lawton," but to "ripen *two weeks* earlier, and in quality the best berry grown" We hope he will give us a more perfect account of it for our readers, as accounts of new and valuable varieties of small fruits are of great interest to the commercial as well as to the grower for family use.

The "American Entomologist."—We have received the prospectus of this new monthly journal, to be issued September 1st, 1868, under the editorial care of Benj. D. Walsh, M.A., of Rock Island, Illinois, and Chas. V. Riley, of St. Louis, gentlemen who have made entomology their study for many years, and who occupy official positions in Illinois and Missouri as State entomologists. Price, $1 per annum.

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Seed for Lawns.—This month is a good time for seeding down new lawns. Let the ground be first thoroughly prepared, that is, dug at least one foot—better to be eighteen inches—deep, and all of this depth to be of good rich loamy soil, not ten inches of poor clay or sand with two inches of top dressing, but all the depth of good loam suitable for growing a heavy crop of corn or a bed of carrots; make the whole depth and quality of soil uniform, without regard to the rise and fall of the grades; in other words, do not form the soil in one place fourteen inches deep and in another only ten, and then calling it an average of one foot; because the lawn hereafter will tell of your work by its exhibit of rich green grass in the deep soil places and of yellow dried spots in the shallow ones; but make it all an even, regular depth, whether on a rising knoll or a low level grade. Rake and pulverize with the roller all the top surface as fine as an ash heap. When ready for sowing, procure for one acre—or in proportions according to the surface to be seeded—two bushels of Blue Grass, two bushels of Red Top, half a bushel of Creeping Bent, and one eighth bushel of White Clover; mingle them well together, and then divide into three equal parts. Sow first one part; then go over the ground with a fine rake, say from north to south, raking the whole surface back and forth to lightly cover the seed; then sow another third portion of the seed, and repeat the raking cross-wise, or from east to west; then sow the last re-

maining portion of seed, and with a heavy roller, roll or press the whole surface, both for the purpose of cementing the seed in the soil for vegetating, and also to prevent measurably the wash liable to accrue from rains. We sometimes see advice of one bushel of seed to an acre; again, of two or three, with a sprinkling of rye, as they say, to shade the young grass,—the adviser probably forgetting that the strong, rank roots of the rye do more injury by extraction of moisture and food from the roots than the benefit, if there is any, obtained from its shade. Loudon, we believe, was in the practice of using from six to eight bushels of seed to the acre; Downing, from four to six; and our experience of twenty years over many and many an acre is, that if a good firm lawn is expected the first year, it is always unsafe to use less than four bushels, and that the addition of one or two bushels more well pays in the thick nest of grass readily grown and the lessening of labor in extracting weeds, that, where no grass is, will surely grow. A top dressing of bone meal, ten bushels to the acre, with two bushels of salt, and one half bushel of gypsum (plaster), will also always be found a profitable expenditure.

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GATHER pears as soon as the stem will separate freely from the tree by gently raising the fruit. Place the pears in single layers and cover with flannel, when a few days only will elapse before they will ripen and color up even more beautifully than when left upon the tree, besides retaining, or rather developing, a more juicy character,—so that some varieties, of only second or third quality, when ripened on the tree, become nearly first-rate when house ripened.

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LARGE EXPERIMENTAL ORCHARDS.—Our Western friends excel in large collections of native and foreign apples, which they are growing and fruiting toward establishing knowledge of their comparative values at the West, as well as aiding toward correction of nomenclature. We know of quite a number of gentlemen having four to six hundred sorts; but the two largest collections, to our knowledge, are those of A. M. Lawver, South Pass, Ill., who has somewhere about 1,500 sorts of apples, and E. H. Skinner, of Marengo, Ill., whose collection numbers over 2,200 named varieties of apples, gathered from almost every part of the earth.

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"STEVENS' GENESEE is a poor pear, rots at the core, is never very good, and never was worth growing for any purpose." We find the foregoing in the Fruit Committee's report for Massachusetts, published in the American Pomological Society's Transactions, and are not a little surprised at it. We have yearly met the pear, and eaten of it grown in many sections of the country, for over twenty years, and our experience with it has always been to place it as certainly in the pomological rank of "very good;" and often, when grown on light dry soils, we have found it to rank almost first in quality and of extra superior size and golden yellow beauty. We will venture the statement, that long after Shurtleff's New Seedling pears have been put in the condemned list, where they belong, that Stevens' Genesee will remain on the catalogue as a valuable sort for many sections.

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EARLY COLORING OF GRAPES.—In our notice of grapes, this and former years, we find their first coloring about as follows, in order as we name them, viz.: Sherman, Mary Ann, Miles, Adirondac, Maxatawney, Ives, Logan, Hartford, Clinton, Concord. This early coloring, however, does not always indicate early ripening, as the Concord always really matures before the Clinton; so, also, the Hartford before the Maxatawney. But sometimes sales may be made of unripe fruit to those whose palates will bear severe pressure to serve a pride in saying, "I had grapes for dessert at my table to-day."

GOLDEN CHAMPION GRAPE.—This in all respects extraordinary grape was raised by Mr. Thomson, gardener to his Grace the Duke of Buccleuch, at Dalkeith Palace. "It was," Mr. Thomson states, "raised about five years ago from a seed taken from a grape that was a cross between the Champion Hamburgh and the Bowood Muscat." The bunches are large, of a slightly tapering form, and heavily shouldered. The stalk of the bunch is stout and fleshy; that of the berry stout and warted. The berries are extra large, obovate or ovate, slightly pointed; in some instances almost round; the skin is thin; the color clear pale yellow or golden, inclining when fully ripe to deep amber on the most exposed side. The flesh is firm, yet remarkably juicy and tender; the flavor rich, somewhat of the character of the best ripened Black Hamburghs, but exceedingly luscious and agreeable. In short, the fact of its emanating from the source already mentioned is in itself a guarantee of its great excellence.

The plant is remarkably free and robust in growth, and very prolific, requiring exactly the same sort of treatment as the Black Hamburgh. The leaves most nearly resemble those of the Muscat; they are slightly lobed and very deeply and sharply serrated, and the leaf-stalks have a reddish tinge.

This is indeed a noble grape, and one which will take the highest rank among white varieties. It supplies a desideratum which has long been felt, viz., the possession of a white grape of easy culture like the Black Hamburgh, which latter is, *par excellence*, the very best constitutioned grape in cultivation, the gardener's sure and trusty friend. The berries of this new acquisition are of the very largest size, resembling in that respect huge Canon Hall Muscats, while the bunches are as large as those of the best variety of Hamburgh, the Victoria, or Frankenthal.

Three bunches of this splendid new variety were exhibited at the meeting of the Fruit Committee of the Royal Horticultural Society, which took place on the 6th of July, where it was unanimously awarded a first-class certificate. It may be added that this fine grape has passed into the hands of Messrs. Osborn, nurserymen, Fulham.—B., in *Gardener's Chronicle.*

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SUTTON'S RINGLEADER PEA.—A writer in the London *Journal of Horticulture* claims the above-named pea to be at least ten days earlier than any other of the early varieties.

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RASPBERRIES IN ROWS.—We notice A. M. Purdy, an extensive grower of raspberries, states that he prefers growing the canes in rows or hedges rather than in hills, as being more self-sustaining. This is in accordance with a practice we named last year as followed by a good cultivator both with raspberries and blackberries, and has been our own practice for some half dozen or more years. A light dressing of rotted compost or manure, sprinkled among the canes in autumn and forked in lightly in spring, we also find to pay well in the crop of fruit. Mr. Purdy also states that he practices cutting in the new growths when about three feet high, as we have repeatedly advised, and finds it successful.

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